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SOME

THOUGHTS

CONCERNING

The Unusual Qualities

OF THE

A I R.

CONTAINING

Some Cautions necessary to prevent Malignant and Pestilential or Contagious Distempers.

As also

Proper Medicines to prevent the ill Effects of Malignancy and Contagious Infection, either in Respect of Malignant Fevers, the Small-Pox; or Intermitting Fevers or Agues, especially where Endemical or Epidemical, as in *Kent* and *Essex*.

By *RICHARD BOULTON*, sometime of *Brazen-Nose Colledge in Oxford*.

L O N D O N :

Printed for *JOHN HOOKE*, at the *Flower de Luce*, over against *St. Dunstan's Church* in *Fleet-Street*. M DCC XXIV.

THOUGHT

ЭПИГРАММЫ

The United States

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RI A

CONFIDENTIAL

Some Caution necessary to prevent the
Lament and Contention of Contagious
Diseases.

22

Proper Medicines to prevent the ill effects
of Malignant and Contagious diseases
either in Persons or Animals.
Small-Pox, &c. in children &c.
Especially where the small or
in New York.

[Faint, illegible markings]

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THE
ILLUSTRIOUS PRINCE

JOHN,
DUKE OF MONTAGU.

May it please your Grace,

OUR Noble Ancestors, have continued so Illustrious a Character to Posterity; that it is a great Happiness to find the

same, equally shining in your
Grace: A Character, so wor-
thy of its Noble Origin, ex-
celling both in Learning Vir-
tue and Loyalty, that I should
be vain to endeavour to draw
that, which lyes out of the
Power of my slender Pen.

I shall therefore forbear to
attempt, according to the u-
sual Methods of Dedications,
what I am not able to do
Justice to, and shall only
humbly beg the Favour to lay
this Trifle at your Feet.

A Trifle, not in respect of
the Subject, being of the
highest concern and worthy
our Consideration, but only
as

as it contains some brief
Thoughts, sufficient to guard
us from Dangerous Effects: for
my Intention here was not to
write a thorough or com-
pleat Tract, but to propose
just and necessary Cautions,
against such Evils, which I
chose to do in as few words
as I could.

The Honour your Grace
hath been pleased to do the
Faculty of Physick, in being
a Fellow of the College,
encourages me to hope that
any thing that may seem Rea-
sonable that way, may meet
with your Graces favourable
Acceptance and Patronage.

If

If this Trifle shall seem so
to your Grace, it will be the
greatest Satisfaction and En-
couragement to

write a thorough or com-
pleat Treatise, but I suppose

just and necessary Cautions,
against such Evils, which I
chose to do in a few words

Most Humble and

Obedient Servant

The Honour your Grace
hath been pleased to do the
Honour of Physick, in being
a Fellow of the College,
encourages me to hope that
any thing that may seem Res-
ponsible that way, may meet
with your Graces favourable
Acceptance and Patronage.

SOME

World, are obliged to breathe the



are liable to be altered and vari-
only affected according to the dis-

crete Qualities of that Air; and
THOUGHTS

accordingly as that is impregnated,
and endowed with several various

Extraneous Bodies, Vapours or Ef-
The Unusual Qualities

likely to affect human Bodies ex-
ternally through the Pores of the

Skin, but internally, when inhaled
AIR, &c.

and rarely'd Vessels, containing hu-
mans more externally rarely'd and

SINCE all Creatures
who have the Faculty

of Respiration, and live
upon the Superficies of

this Terrestrial Globe, and inha-
bit the several Climates of the known

World

World, are obliged to breathe the Common Air or Atmosphere they live in ; and since not only those, but Mankind, whose Lives are more particularly valuable, as a Creature of the most Noble and first Rank, are subject to be altered and variously affected, according to the different Qualities of that Air ; and to receive different Impressions, accordingly as that is impregnated, and endowed with several various Extraneous Bodies, Vapours or Effusions ; and since these are not only likely to affect human Bodies externally through the Pores of the Skin, but internally, when sucked into the Lungs, into more tender and rarify'd Vessels, containing humours more exquisitely rarify'd and expanded ; and consequently are liable to be altered and depraved according to the various Dispositions of that Air we breathe, which may lay the foundations of Disorders and Distempers, pernicious and destructive
to

to human Bodies, as those extraneous Bodies, Vapours, or Effluviūms are more or less unwholsome and of a different Nature ; I say, since Human Bodies are thus disposed and liable to be ill affected and disordered by the various Qualities of the Air we breathe, it is not only necessary but requisite we should consider, the different Qualities of that Air, and what Extraneous Bodies, Vapours, or Effluviūms it may be impregnated and endowed with ; and what alterations or ill Effects these may occasion and produce, either at the present, or for the future ; and how far they may be prejudicial and pernicious to Mankind.

To determine and enable us to judge of the different Qualities of the Air, and what Extraneous Bodies or Vapours it may be Impregnated and Endowed with, we are to consider, how many Ways it may be furnished with such Vapours or Effluviūms ;

which must be, either from foreign Globes, far distant from the Earth we live in, and from the Superficies of our Atmosphere; from extraneous Bodies, or Vapours emitted or rising from Bodies on the Superficies of our Globe; or from Vapours and Effluviiums transuding and ascending out of the Bowels of the Earth.

As for those Globes which are vastly distant from the Earth we live in, and far remote from the Superficies of our Atmosphere, these are either the Stars, the Moon or the Sun.

The Stars are so many Thousand Miles distant from us, and separated by such a spacious and boundless Ether or Medium, that we can but just perceive the Glimmering rays of those Celestial Bodies, which are sufficient to convince us that there are such Stupendious Effects of an Infinite Power; but they are so small, that

that they can have but little Effects in altering the Qualities of the Air we Breathe; much less are they able to inform us, of the Nature of those distant Globes; and consequently cannot afford us any knowledge what Alterations such can produce; only we may conclude, that where the Causes are small and scarce perceivable, the Effects must be inconsiderable; and therefore can do little good, except as Luminaries, or produce not much ill; and consequently cannot contribute much to pervert it or deprave the Disposition of our Air or Atmosphere.

As for the Moon, though that is much nearer than any of the Stars, yet it is also placed at a great distance from the Superficies of the Earth, and separated by a vast extent of fine Æther, which interposes betwixt that Globe and ours, and prevents it from any immediate Effects upon the Air we live in;

in ; and though several Effects are attributed to it, because the Periods seem to keep time with its different Positions, yet it is contrary to all known Laws Statical or Hydrostatical, that it should have any Effect upon any Bodies contained within our Atmosphere, as having no immediate contact with terrene Bodies, but only upon that Æther, which equally encompasses and compresses the Superficies of our Vortex, and the utmost Extent of the Globe we live and breathe upon or in ; for the Air or Atmosphere may be properly said to be a part of our Globe though the most fluid and rarify'd Superficial covering of Earth and Water, and though Lunaticks, or those Distempers which grow worse at certain periods, seem to be equal in distance with the several Positions of the Moon, yet it cannot be demonstrated, that those Effects are owing to it as a Cause, since other periodical Distempers keep an equal distance
betwixt

betwixt their Periods, which depend upon Causes contained within the Limits of our own Bodies; and as for the Ebbing and Flowing of the Sea, that must proceed from some other Cause, both Statical and Hydrostatical Rules excluding it any share in these different Motions of that fluid Element; but not to enter upon Disputes of that Nature, which are foreign to our present purpose, we shall only observe, that the Beams of the Moon, which illuminate our Globe; are only reflected Beams of the Sun transmitted into our Atmosphere, and not the proper Emanations or Effluvia of that Globe; and for as much as the Beams of the Sun reflected from other Substances within our Globe, do not transmit to us the Nature of those Bodies they are reflected from, but are only variously modify'd and refracted in the Superficies of those Bodies, which different refractions variously affect our Sensory, or the Organ

Organ of Sight, and produce the Sensation of different Colours or Refractions, and which only affect the Sense of Seeing, as they are stronger or weaker. Consequently we cannot expect, that the Beams of the Sun, reflected from the Surfaces of the Moon, should convey to us the Qualities of that Body or Globe, especially since they are likewise convey'd through so fine a Strainer as the Interposed Ether, and refracted and altered also in passing through the great and lofty expanded part of our Atmosphere, which is reckoned, or computed, to be Seven Miles perpendicular in height, buying up a Pillar of Quicksilver in a Weather-Glass, such a considerable height, till it amounts to an Equilibrium, or equal Weight of a Pillar of Air, of the same Diameter and thickness, pressing upon the Basis, or Bottom of that Pipe the Mercury or Quick-silver is contained in.

Various effects our Sensory

Organ

As

As for the Sun, it is evident, that it acts upon all Bodies within our Atmosphere by Virtue of its Heat, since in the Summer time, when it is near enough, it rarifies, expands and digests the Superficial Juices of the Earth, as well those in our Bodies, which when fermented, attenuated and rarify'd, are pressed by the force of the incumbent Atmosphere into the Roots of Plants and Trees, and rise higher, as further rarify'd, press'd and expanded in the Vessels of each Plant, which being variously fermented and strained through different Vessels along with Specifick Juices, are assimilated and converted into the proper Juices of those Plants.

The Sun Beams also affect other Bodies on the Superficies of the Earth, and by their active Parts, put the Parts of other Substances in Motion, and causes them to emit Vapours and Effluvioms, which, according to their different Natures

variously alter and affect the Air we breathe, and render it more or less wholesome and pernicious, Healthful or Destructive: But though the Sun hath such considerable Effects upon this Globe, when near us, yet when but a little further off in the Winter, we see that it hath little or no apparent Effects upon the Climate we live in; and if so small a difference can extinguish the obvious Effects of so bright a Body as the Sun, we can scarce imagin, that the Moon or Stars which are much further off and Shine but faintly, should have any considerable Effects, or indeed any at all, especially since they cannot be perceived.

It appearing hence, in a great Measure, how the Air we breathe may be altered by Foreign Globes far distant from our Earth, we are next to consider how the Air we breathe in may be altered and depraved by Vapours and Effluvioms emitted,
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and arising from the Superficies of the Globe we inhabit, which appears from the vast variety of different Substances which may be observed on the Superficies of the Globe we live upon, which deprave the Natural Temper and Disposition of the Air, and consequently variously affect the Mass of Humours circulating through the minute and small Vessels contained in and dispersed through the Substance of the Lungs, such as putrify'd Bodies, and the constant Emanation of Vapours occasioned by standing Waters, and the unwholesome Stenches which naturally flow from the products of Art, as well as Nature, which more particularly affect those Persons employed in such Arts, and more immediately exercised about them; thus we see the strange decay in those Persons which work in Pot-houses, Chymical Laboratories, and other employments, where they are exposed to unwholesome Vapours and preterna-

tural Fumes. And these are further improved to an ill purpose, and grow more pernicious and unwholesome, and deprave the wholesome Disposition of the Air, when more forceably put in Action by the united force and heat of the Sun Beams.

But the greatest and most considerable Alteration which the Air receives from the Extraneous mixture of Vapours and Effluvia, seems to be from such as transude and ascend out of the Bowels of the Earth, whether of a Mineral kind or of any other Nature. And as such sort of Vapours and Effluvia are most likely to produce great and extraordinary Alterations, so consequently those Alterations are probably most pernicious, and of the worst consequence, and aptest to occasion the worst of Accidents in human Bodies,

From

From such kind of Vapours differently agitated and put in Action by the nearer approach, or greater distance of the Sun, seems to arise that great variety of Climates, not only in the same Latitude, but several Parts of the Terrestrial Globe; for accordingly as the Air is variously affected with such Effluvioms of different kinds, these Vapours being put in Action by the heat of the Sun Beams produce different Effects, and render the Air in such Climates more or less wholesome, pernicious and depraved: Thus Agues are more frequent in *Kent*, and other Distempers more common and customary in different Parts of the World.

When by the Constant and Customary transmission of particular Vapours and Effluvioms, any Country is frequently or constantly subject to such Diseases; these Distempers are said to be Endemical or proper to that particular Climate; but when
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Contagious or Malignant Distempers happen to rage more than commonly or accidentally in any Place, such Disorders are called Epidemical, or spreading at some particular Times, arising from the accidental Discharge and Ascension of particular Vapours out of the Bowels of the Earth at that Time.

The Temper of the Air in different Climates is also altered differently according to the Quantity as well as Quality of such Vapours, and as the Air is more plentifully or sparingly impregnated with such preternatural Vapours, which also in the same Climates exert themselves more or less vigorously according to the different Seasons of the Year. Thus in Summer time Contagious or Malignant Distempers rage more vigorously and universally and are less Epidemical in the Winter.

And

And as the Temper and Disposition of the Air varies according to different Climates, the various quantities of Mineral Effluvia, and the different Seasons of the Year ; so we find a vast difference according to the Nature and Qualities of such Mineral Vapours. Some Minerals afford very wholesome and Salutiferous Steams, whilst others are dangerous and pernicious. Thus the Mines in *Cornwall* make the Country wholesome and healthful, whilst others produce Contagious and Pestilential Qualities, which render such Countries frequently subject to such Distempers.

Those Mineral Effluvia or Vapours which produce Pestilential Diseases, are of a most pernicious kind, and are attended with very violent and most fatal Symptoms, and such are esteemed, by that most Worthy and profound Judge of the Works of Nature, the Honourable *Robert Boyle*, to be of an Arsenical kind,

kind, producing Effects of the most Malignant and Poisonous Nature, being most offensive and destructive to Human Bodies.

It appearing then from what we have said, that the Temper of the Air, and its most Unusual Qualities, which are likewise most destructive and dangerous, chiefly depend on the Effluvioms or Vapours rising out of the Bowels of the Earth, whenever we find the Temper and Disposition of any Climate to vary and differ from what it commonly does in such Climates, we have good reason to conclude, that the Air is Impregnated with some unusual Effluvioms out of the Bowels of this Terrestrial Globe, which being mixed with and dispersed through the Air produce that uncommon Indisposition.

And since we are constantly obliged to breathe the Air we live in, and
to

to impregnate our Blood with such Heterogeneous and offensive Particles, which perverting the Course of Nature may produce ill Effects in human Bodies, we ought to be very careful to guard our selves against such Accidents as may be Destructive, and so prejudicial to Mankind, and to make use of necessary precautions to prevent such ill Accidents, as such Inconveniencies may render us liable to.

It cannot be out of our Memory what fatal Consequences have lately happened Abroad, especially in the South Parts of *France*; and how many Thousands have been destroyed by the fatal Effects of an ill disposed Temper of the Air, so Mortal and Epidemical. And as other Parts of the World may be likely to suffer by Accidents, and may be liable to the same approaching Dangers, by hidden Vapours and Effluvia transmitted from the inward

Parts of the Earth, and by Mineral Effluviūms of a Malignant kind; whenever we find any unusual Quality in the Air, we have a great deal of Reason to be afraid of some unusual Accidents, and to make use of all necessary precautions to prevent them. If such ill and Malignant Qualities should be convey'd from the inward Parts of the Earth into our Atmosphere, such cautionary Preparations would arm us the better against their ill Effects; and tho' no such danger, as we might justly fear, should happen, yet at least we should reap this advantage by our jealous surmises, that we should free our Bodies of ill disposed Humours, and put our selves in a better State and Condition of Health; so that our Labour would not be ill bestow'd and fruitless, nor our Pains ill rewarded; the just Cautions to arm our selves against the greatest of Dangers, would at least secure us against less Evils.

And

And that at the present, we have very probable Grounds and substantial Reasons to fear some impending Evil, and future Danger, which may too suddenly happen in our Climate, and consequently we ought to make use of proper Methods to prevent such Events, will in a great measure appear, if we consider the Steps and Progress of Malignant or Pestilential Distempers in former Times, and also the Intemperies of our Climate for some time past, and at the present time; which may give us sufficient grounds to suspect the consequential Intemperature of the Air for the future, or time to come.

As for the Steps and Progress of Malignant or Pestilential Distempers, formerly it hath been observed, that the Pestilence took its Course successively through several Parts of Europe, beginning first in Asia, and then running through Italy, Germany, Denmark, Sweden, England, &c. In

Turkey it is Endemical, and constantly appears every Year; but this in a great measure depends on the excessive Heats of the Climate, and their way of living; their Blood being too much phlegmated to support and supply a sufficient Diaphoresis or Sweat, in the Time of excessive Heat, and this is, in a great measure, occasioned by their Abstinence, according to *Mahomet's* Laws, from Spiritous Liquors, which might sufficiently attenuate the Serum of the Blood, and render it apt for Transpiration, so that when the Mass of Humours begin to be fermented with Heat, the phlegmatick Parts of the whole are too great in Quantity, and too gross in Quality to be discharged according to the ordinary Course of Nature.

But it appear'd lately in *France* without any Mask or Excuse to hide the Evident Cause of its Malignancy, it plainly appearing to proceed from
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Contagious Parts of Matter dispersed through the Air, which, from what hath been said, appear to be supply'd by Subterraneous Mineral Effluvioms, or Vapours, proceeding out of the Bowels of the Earth; Which God Almighty preserve us from!

But it is too much to be feared, that some Heterogeneous Particles, or Malignant Vapours and Effluvioms have, and are, too much dispersed through our Atmosphere, or the Air which we now breathe in our Climate; and this will appear too likely, if we observe, that near the whole Twelve Months last past, the Nitrous Parts of the Air have almost been totally overpower'd, and hindered from producing their Natural Effects as usual in this Climate: For we may observe, that most of the last Summer was not only hot and dry, but that most of the last Winter appeared more like Summer than Winter Weather, there being little
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appearance of either Frost or Snow, to what is usual in this Climate; and we at the present find, that the Heat of the Weather hath some time exceeded what it hath for several Years last past, which if it should encrease proportionably, as the Sun approaches, it must render the hottest Season of the Year excessively so; and consequently must produce exceeding Malignant Distempers, if not Pestilential.

And that we may reasonably conclude, that such Intemperatures of the Air proceed from Subterraneous Vapours, or Effluvioms, which not only over-power the Nitrous Parts of the Air, but are put and excited into a preternatural Fermentation by the heat of the Sun; I say, we may reasonably deduce this Conclusion, since the Sun would have its constant and certain effect at the same Distance, and consequently, that the Differences must proceed from some Heterogeneous

geneous Particles, which concur to produce such Alterations and Differences in the Natural Disposition of the Air in one Climate.

And that the Air is too much Impregnated with some Heterogeneous Vapours, is evident from the Maladies which have lately afflicted several Persons, as particular Feverish Heats and Indispositions, attended with Pains in the Head and dizziness, and other Symptoms much different from those which appear in Phehisis or any usual Distempers.

If then, as we may well conclude, or at least suspect, the Air we breathe, is impregnated with Heterogeneous Particles, as it seems to appear, not only from what we have mentioned, but the sudden and surprising Death of several Persons, especially of late, since we continually suck in, and imbibe these Heterogeneous Particles into our Blood in Respiration, it seems

seems worth our while to consider what Methods are proper to prevent their ill Effects, if either it should happen, that the Air should be more plentifully impregnated with such Particles, or by long breathing them into our Lungs, the Mass of Blood should be more strongly impregnated with them, so as to enable them to produce their ill Effects more vigorously.

In order to assign proper Methods to this purpose, it will be requisite to consider, what Causes commonly concur to produce Malignant Pestilential Distempers, from whence it will appear, what Methods may be proper and most expedient to prevent such Maladies, and to secure Mankind from such Dangers as may happen, without the over-ruling hand of Providence to divert such pernicious Qualities which may be more plentifully emitted out of the Bowels of the

the Earth, and dispersed through the infected Air we breathe in.

And, first, From what hath been said, it appears sufficiently, that the Antecedent Cause of Malignant or Pestilential Distempers depends on, and is composed of extraneous malignant Mineral Vapours, or Exhalations rising out of the Bowels of the Earth and Impregnating the Air we breathe with pernicious Particles.

These Mineral Effluviiums or Vapours, First and Primarily affect Human Bodies, and being sucked into the Lungs in Breathing gradually impregnate the whole Mass of Blood with their Poisonous Steams.

These Poisonous Particles of Mineral Vapours, at the first are so small in quantity, that they are not able to produce any ill Effects, being lodged and harboured amongst the more Phlegmatick and gross Parts

of the Animal Humours ; but being gradually collected to a greater quantity they exert themselves more powerfully, and the gross Parts of the Blood being attenuated and subtilised by their corrosive Qualities, or at least some part of them, they are no longer able to cloak and skreen them from shewing their corrosive Qualities.

The Mass of Blood being thus gradually more strongly impregnated with these depraved and Heterogeneous Particles, and some Parts of the Mass of Humours attenuated by their corrosive Qualities, they begin to discover those Qualities ; run them into a more fluid form by their corrosive Faculty, and separating them from the rest, the perfect Mixture of the Mass of Humours is by this means broke, and made an imperfected Mixture, the grosser Parts being cast off and separated from the thinner, and by this means rendered

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unapt and unfit for Circulation; the grosser Parts occasion Obstructions in the small and minutest Vessels; whilst the more thin and corrosive corrode and destroy the continuity of the Vessels, whose joint Effects make such a sad Carastrophe in human Bodies, and putting the whole fabrick into disorder, produce those ill Symptoms in Pestilential and Malignat Distempers; as Tumours, Ulcers, Inflammations, Deliriums, Mortifications and Death: In the Glandulous Parts they produce Buboës, in the fleshy Parts Carbuncles and Blotches, in the Nervous Parts, especially the Membranes of the Brain, Inflammation, Delirium and Phrensy, in the Glandulous Parts of the Brain, and other noble Parts, violent Symptoms and sudden Death.

These Malignant and Pestilential Distempers being thus formed, and the Blood strongly Impregnated with

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destructive

destructive Vapours as well as the Air, the Distemper begins to be more contagious and spreading; the ill Effluvioms heaped up in human Bodies now exerting themselves powerfully, and breaking out of those Repositories, unite with those contained in the Air, and more strongly affect those Persons about them; and thus the Infection is spread and promoted. Secondly, these Effluvioms from human Bodies uniting with those contained in the Air, and those already collected in the Mass of Blood.

But besides these Primary and Secondary Antecedent Causes to produce Malignant and Pestilential Distempers, there are other accessory and Concurring Causes requisite; for since all are not equally subject to them, but several continue a long time amongst such Persons without prejudice, till at the last their Constitutions are gradually depraved and
more

more strongly affected with the Venemous Exhalations.

This Accessory concurring Cause, must be a particular Disposition in the Blood, to retain, and be affected by these Infectious Vapours or Effluvia of the Earth, and human Bodies; otherwise all People would be equally subject to be Infected at the same time. To discover this Disposition, we are to consider, that whatever is contained in the Mass of Blood, as long as it is thin enough to circulate through the Vessels, there is no danger of Obstruction, and consequently there can no damage happen, except it be too thin, and corrosive, and opening the Extremities, or otherwise corroding and destroying the Continuity of the Vessels occasions an Extravasation; but even to produce that Effect, the Humours must be very sharp before they can break the Vessels, as long as they circulate freely, since they stay not long

long enough in any Part to produce that Effect, and therefore we may well conclude that there must be Viscosity also in the Blood, and that those viscous Parts being either too thick to circulate, or separate from the rest, first cause an Obstruction and detain these corrosive Humours, the perfect Mixture of the Blood being first broke and destroy'd by those Contagious Parts.

Indeed when the Vessels are too much crouded and extended with Humours, as in Plethorick Bodies, Corrosive Particles crouded and impelled by the force of Circulation into the small Pores of the Vessels, may too much extend them and contribute to separate and divide the continuity of their Parts; but since there is Naturally a Viscosity in the Blood and Serum, and this may be, and frequently is too great; this united with those Corrosive Qualities, and retaining them, will give them

a greater opportunity of Corrosion. Thus a Viscous Phlegm retaining a sharp Humour upon the Top of the Stomach or Ventricle, where there is a plentiful Distribution of Nerves, causes a corroding Pain at the Stomach, called Heart-burn; and in the Membranes, about the Musculous Parts, occasions Rheumatick Pains, especially where they are most Sensible and incapable of Extension; and the Membranes of the Joints corroded with a sharp or Austere Viscous Matter produce those excessive Pains of the Gout, where the Obstruction so much retains those sharp Humours that they corrode the Vessels in pieces, and occasion such an extravasation of this Viscous Matter as to produce and form Nodes.

From hence it plainly appearing that a predisposition in the Blood is an accessory concurring Cause, and that this predisposed Humour, is a
Viscous

Viscous gross Humour, which retains and heaps up the Contagious Particles of the Air we imbibe, and draw in with our Breath, it consequently follows, that the Conjunct Cause, or Matter of the Disease is, Contagious Particles lodged first in a Viscous Humour, which was an accessory Antecedent Cause, and disengaged or separated from the sharp Humour, and causing Obstructions, becomes along with that sharp Contagious Humour, a Conjunct Cause, and both together make up the Material Cause, or the Morbifick Matter of the Disorder and Distemper, which according to the Degrees, produces more Malignant Diseases, and when abounding in an extraordinary degree, even the Pestilence, which is so obnoxious and fatal to Mankind.

And that a Viscous Matter, along with the Contagious Particles, is the Conjunct Cause, and produces Ma-
lignant

lignant and Pestilential Distempers, is evident from hence, since all People are not equally subject to such Distempers, and some never have any at all, though they live in a Contagious Air, and amongst Infected Persons; and that a Viscous predisposition of Blood is necessary as a concurring Cause is manifest; for as long as the Humours are sufficiently attenuated, though sharp corrosive Particles are imbibed into the Blood, and mixed with it in Respiration, they are soon discharged and separated from it again, by the common Emunctories and discharges of Nature, as by Sweat, Transpiration, Urine or Stool, before they can have any time or power to alter and corrupt the Blood by destroying its Texture and Mixture, for the constant Agitation and Circulation of the Blood preserves its Mixture along time when kept in perpetual Motion; but when the Blood is too thick it retains a greater Quantity,

city, hinders the Natural Discharge, and consequently tends to heap up Infectious Particles.

Besides, when the Blood abounds with Viscous Parts, it produces a larger Discharge or Separation of Phlegmatick Parts, when its Texture and Mixture is imperfect, which occasion Obstructions, and concur to produce Malignant Symptoms, when thrown Critically upon the minute Vessels or Glands of any Part.

When any such Critical Discharge is made, and a Malignant or Pestilential Distemper is formed, and properly in *esse* or *factu*, that is, perfectly formed, the Antecedent, conjunct and Accessory Causes along with the Symptoms produced, make up the formal Cause, which is the Disease and its Symptoms.

But to compleat this, there is one Cause accessory, which is the Procatartick

tartick Cause, or that which puts the Antecedent Causes in Action; as any sudden Passion of the Mind, and the ill use of Non-Naturals, or the force of Imagination; but that which is chiefly so and External, is the approaching Heat and Activity of the Sun Beams, which put those Contagious Effluvia, Vapours or Exhalations, in Action more briskly, by encreasing the Degrees of Fermentation or Digestion, the Consequence of which we may justly fear and dread; for if such Contagious Effluvia are in the Air, and should encrease, it may reasonably be feared, that Contagious Distempers may happen more or less Malignant, if not Pestilential, according to the Degrees of the Primary Antecedent Cause, *Viz.* Extraneous Mineral Exhalations, Vapours or Effluvia, from which God Almighty, or Art, must preserve us, if they should by the course of Natural Causes break forth.

From what hath been said, it appears what just cause we have to dread the ill Consequences of Contagious Vapours, which we may too reasonably suspect. It may therefore be requisite to consider, what Methods are most proper to prevent and avert the Event, and Consequences of such dreadful Causes; which may easily be deduced from what hath been said: For if Contagious Vapours are retained by a Viscous Indisposition of Blood, and sharp Corrosive Humours, or Vapours, collected and run into a Fluor, destroy the Texture and Mixture of the Blood, and by this Means, produce the Symptoms of Malignant or Pestilential Distempers, the proper Intentions to prevent such Accidents, must be to Correct and Discharge that Viscous Matter which retains Contagious Vapours, as well as to correct and prevent the ill Effects of those Infectious Effluvia; it being

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impossible either to prevent Mineral Exhalations, which is the Primary Antecedent Cause, or to hinder and obstruct the Sun's approach, which is the Principal Procatartick Cause, though sometimes the Antecedent Cause, when encreased to a great Degree, and plentifully heaped up, may also be a Procatartick Cause, and put it self in Action.

Since then the Principal Intentions to prevent Malignant or Pestilential Distempers are to remove the Natural Indisposition, which retains Contagious Vapours, and to correct those Vapours, or Malignant Particles which destroy the Texture of the Blood, and produce such fatal Consequences, we are to consider what is most reasonable to be done.

As for the Air, it is of such vast Extent, and the Superficies of the Earth so large, that it will be hard to deal with so extensive a Subject Physically,

Physically, but in the Compass of a human Body we may be more likely to deal with them.

As for the Predisposition of the Blood which renders human Bodies most likely to retain them, and to heap up Contagious Particles, since that is a Viscous Humour, it is obvious to those who have taken Pains in Physick, what Intentions are requisite to that purpose; as Bleeding and Purging, for Bleeding emptying the Vessels makes room for Fluids to dilute and thin the rest, and Purging discharges a grosser Humour than passes off by any other Natural way, which Nature makes use of.

And to correct those Contagious Vapours which may already be heaped up in the Blood, or may hereafter be contracted, since they would pass off, if nothing was in the Way to obstruct them, without destroying

destroying the Texture of the Blood, since thin Humours flow best off by Diaphoresis, or through the Pores of the Skin, when the gross Humours are removed by Bleeding and Burge- ing Alexipharmick Diaphoreticks, seem most proper for that purpose, which may correct those Malignant Vapours and discharge them, and consequently preserve the Texture and due Mixture of the Blood, and prevent those Malignant and fatal Consequences.

As for particular forms for this purpose, I need not direct Physicians, they being able to prescribe for themselves; but every Body not being Physicians, or able, or willing to employ them, as too expensive, I shall recommend some Medicines convenient for that purpose, to the use of those who think it worth their while to preserve their Health, and guard themselves from future ill Consequences.

And,

And, as I said before, it may not be amiss to pursue such measures, for they will at least have this advantage, that if Pestilential Distempers happen not, they will still guard themselves from the Dangers of Malignant Distempers, which will be worth their while, and reward their Care of their Health, and preserve a good Constitution.

Indeed for the sake of those who cannot afford to imploy a Physician I should have laid down forms for their use, that they might apply themselves to Apothecaries, but some of them are too apt to adulterate Medicines, and leave out any Ingredients that are dear, though most useful and necessary; besides in the several Books I have already writ, I have been so free that way, that several, though they have made use of them to their Advantage, yet they have not had the Civility to acknowledge the freedom, in a way
customary

customary to those who have been educated in Physick, though it hath been the whole business and study of my Life, since I left School Education.

If therefore any one shall think it worth their while to take care of their Health, and guard themselves from future ill Consequences, after Bleeding to attenuate the Humours, to discharge the Viscous Humour, though I hate any thing that looks like common Quackery, notwithstanding the Art of Physick was built upon it, I shall recommend particular Medicines for that purpose already prepared, with Directions for their Use. Yet if any shall apply themselves to me for Advice, I shall not scruple to prescribe, let them make use of who they please. But to proceed from this accidental Digression.

The properest Purge which I should recommend upon this occasion, is Dr. Sagittary's Elixir, a Me-

dicine of Excellent Use, and dis-
 charging obnoxious Humours with a
 great deal of Safety. This ought
 to be taken once or twice a Week,
 working gently, and by making a
 gradual discharge without too much
 force upon Nature, and therefore
 most agreeable to human Bodies;
 I have no Interest in recommending
 this Excellent Medicine, but only
 the good of Mankind. Those Days, which are free from
 Purgings, they may take an *Anti-ma-*
lignant and *Antipestilential Tincture*,
 which will correct those Contagious
 Vapours, and expel them out of
 the Blood, gently through the Pores
 of the Skin, without the trouble or
 force of immoderate Sweat, or any
 sensible sweating at all, taking
 a Spoonful every Morning, and
 at Night going to Bed, in a Glass
 of Wine and Water, or Wine only,
 or in Beer, if any shall like it ra-
 ther.

It also preserves the due Mixture and Crasis of the Mass of Blood and Humours, preserving human Bodies from Contagious Infection, whether from those more Malignant or Pestilential Effluvioms, or Vapours dispersed through the Air, from the Superficial or Subterraneous Parts of the Earth, or from the Bodies of Infected Persons. It also preserves human Bodies in such a perfect state of Health, that it prevents and guards them from the ill Effects of such less Indispositions and Intemperatures as occasion and render Mens Bodies liable to Agues or Intermittent Fevers, as in Kent or Essex; where it will be of singular and universal Use, if frequently made use of in those Climates.

It will likewise, if frequently made use of, contribute to prevent the spreading of that Contagious and Infectious Distemper the Small-Pox, or at least render the Blood of so wholesome a Disposition, by clean-

ling it of its Impurities, that if it does not totally prevent them, yet it will render them less virulent, or much milder and less dangerous, and prevent the unnecessary hazard and danger of Inoculation, a new contrived Practise which only forestalls future by present Sickness, and hastens on that Inconveniency which would be effected or happen at a greater distance of Time, or perhaps not at all.

And that the Small-Pox depends on a particular Disposition of the Air, which destroys the due mixture of the Mass of Blood, and makes an Alteration in its Texture is very evident, since we see, that this Disease is often times Epidemical, and rages more universally at one time than another.

And that the Disposition of the Air, in this Case, destroys the Texture of the Blood, appears from the Symptoms of it, for we see, that the grosser Particles of the Blood, in
that

that Disease, are not only separated from the rest, but that they are critically cast off in the Glands of the Skin; which evidently appears, since as the Air is impregnated with particular Vapours, milder, or more sharp and biting, the Pox are of a benign kind, or Corrosive, and occasion Pits, or Exulcerations which leave disfiguring Marks behind them.

But in this Distemper there is not only a depraved Indisposition in the Air, but likewise a Predisposition in the Mass of Humours is requisite which from the Symptoms appears to be Viscous, and to depend perhaps on the faults of Digestion, and Crudities thus congested in their Infancy, but this we have not time or room to consider thoroughly.

I shall only add, that to prevent this Distemper the Purgeing Elixir may be used once a Week, and the Tincture before-mentioned those Days that are free from Purgeing, and for some time after, which are also frequently

frequently to be repeated; the Quantity to be proportioned, according to the Person's Age, Directions for which will be given along with that Tincture.

Of the Differences of Contagious Vapours.

Since in the foregoing Sheets we have taken Notice, that Malignant and Contagious Distempers depend on, and are occasioned by pernicious Vapours and Exhalations rising out of the Bowels or the Superficial Parts of the Earth, impreghating the Air we breathe; and acting upon Bodies preindisposed, and furnished with Vicious depraved Humours; we shall briefly add something of the differences of those Contagious Vapours and Exhalations which produce these different Effects; the Effects varying, as we before took notice, according to the variety of the Causes.

And first Warry Exhalations render the Air thick and moist; and obnoxious to Athmatick Persons, and those that have moist Lungs; these
with

with Nitrous acid Effluvia occasion Agues, The Famous Mr. Boyle Observing that a particular Acid mixed with a Volatile, produces a Cold Effervency; In the Small-Pox, the Mixture of the Blood is Broke by Vitriolick Vapours or Effluvia, which appears from the Curdling Effects, which produce Tumours in the Skin, and also from the Nauseous Smell attending that Disease. Malignant Fevers depend on a higher degree of corrosive Mineral Salts, producing a higher degree of Crudities, and much more than Nature can digest, throw off or discharge. In Pestilential Distempers the Effluvia are of a more Malignant kind, and rather of an Arsenical Nature, producing Symptoms of a proportionable Degree of Malignancy and more pernicious.

How these Malignant Effects may be prevented, we have already observed, and where this Tincture may be had, I shall annex by way of Advertisement.

N. B. **T**His Cordial, Anti-Malignant Tincture, will be Sold at Mr. Osborns, at the Golden-Lyon, at St. Margarets-Hill, Southwark; Mr. Scaggs's an Instrument Makers at Wapping-New-Stairs, Wapping; Mr. Dysons, at the Wool-pack in Burchin-Lane, near the Royal-Exchange; Mr. Tredwells, a Toy-Shop, at the Corner of St. Martins-Le-Grand, Newgate-Street; Mr. Hookes, Bookseller, opposite to St. Dunstons-Church, near Temple-Barr; Mr. Hargraves, at St. Anns Coffee-House, over against the Church; Mr. Oakey, Grocer, at the Golden-Sugar-Loaf, in Old Bonstreet, near Piccadilly; Mr. Ewens, a Toy-Shop, at the Seven Stars, near York Buildings in the Strand.

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